REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1-10 are now present in this application. Claims 1, 4 and 8 are independent. Claims 1 and 4 have been amended.

Reconsideration of this application, as amended, is respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 1-7

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,214,627 to Nakashima et al. (Nakashima) considered with U.S. Patent No. 6,031,801 to Ishikawa, and all further considered with U.S. Patent No. 5,283,775 to Finkelstein et al. (Finkelstein), and claim 4, 5, 6 and 7 stand rejected under 35 U.S.C. § 103(a) over the art as applied to claim1 above, and further in view of U.S. Patent No. 5,946,279 to Okada et al. (Okada). These rejections are respectfully traversed.

The Examiner asserts that Nakashima teaches a recording system wherein the recording modes are "altered" between a CAV and a CLV mode. Applicant respectfully takes issue with the term "altered" in that the term is inappropriate for application to the claims at issue.

Notwithstanding the term altered, Applicant believes that the Examiner's intent is to assert that Nakashima teaches *changing* the recording mode between CAV and CLV, as recited in Applicant's independent claim 1 (emphasis added). However, the term "altered" does not appear in claim 1. Please clarify. On the other hand, with regard to *changing* the recording mode between CAV and CLV, it is clear that Nakashima neither teaches nor suggests this feature.

In particular, Nakashima teaches a method that takes an advantage of a *mark length* recording system for a read-exclusive type optical disk in which rotation control of the optical disk is carried out according to a CLV (constant linear velocity) method. The method of Nakashima also takes advantage of the *mark position* recording system (employed for the write-enable type optical disk), in which rotation of the disk is controlled according to the CAV (constant angular velocity) method (see Nakashima, Col.3, lines 30-41).

In an application that combines these two concepts, rotational control is not changed, but rather, *rotational control is exclusively CAV*. In other words, a switching between CAV rotational mode to CLV rotational mode or vice versa does not occur. Further, in an effort to obtain a high access speed and recording density, the read-exclusive and write-enable regions are arranged alternately, starting from the inner circumference of the disk and moving to the outer circumference. The recording frequency used for the write-enable regions is made double the recording frequency that is used for the read-exclusive regions. Rather than switch between CLV/CAV, information is recorded on these read-

exclusive and write-enable regions *at the same angular rotation velocity* (Nakashima, Col.4, lines 48-56). Again, the CLV rotational control is never used as a method of rotation. Rather, a read-exclusive region, which is normally associated with CLV, is instead recorded over using CAV rotational control.

Clearly then, Nakashima fails to teach or suggest a combination of steps in a method of changing a rotating mode for recording between CAV (Constant Angular Velocity) and CLV (Constant Linear Velocity) including *recording input data to a recording medium in CAV mode*, and *changing the rotating mode for recording between CAV and CLV*, as recited in independent claim 1, as amended, and similarly stated in independent claim 4, as amended. Neither Ishikawa, nor Finkelstein, nor Okada, can fill this vacancy.

Claims 2, 3, 5, 6 and 7 depend, either directly or indirectly, on claims 1 and 4. Since neither Nakashima, nor Ishikawa, nor Finkelstein, nor Okada discloses or suggests the above-recited features of independent claims 1 and 4, the references cited hereinabove by the Examiner, either singly or in combination, cannot render claims 1-7 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of these art grounds of rejection are respectfully requested.

Claims 1-3

Claims 1-3 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,028,828 to Maeda further considered with

Ishikawa, and all further considered with U.S. Patent No. 6,055,219 to Ho et al. (Ho) and Official Notice.

With regard to Maeda, Applicant has argued extensively (see Amendment filed on December 5, 2002) that Maeda pertains only to a device that can produce a disc that can be used in either a ZCLV system or a ZCAV system. The arguments presented in the Amendment of December 5, 2002 with respect to Maeda, are incorporated herein by reference.

In particular, Maeda neither teaches, nor remotely suggests, *inter alia,* changing a rotating mode from CLV to CAV (or vice versa) in either system. Rather, Maeda focuses on producing a disc (medium) that is compatible with both systems. The systems themselves only employ a single mode of rotation. In light of such a glaring distinction, the Examiner's assertion that "either system has the ability to switch between rotating modes is evident" is not supported by the Maeda reference.

Therefore, Maeda, like Nakashima, fails to teach or suggest *changing the rotating mode for recording between CAV and CLV*, as recited in independent claim 1, as amended. Neither Ishikawa, nor Ho, nor Official Notice can cure the deficiency of Maeda.

In view of the discussions set forth above, the references cited by the Examiner, either singly, or in combination, cannot render claims 1-3 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection is respectfully requested.

Claims 8-10

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over either U.S. Patent No. 6,028,828 to Maeda or Nakashima, each further considered with U.S. Patent No. 4,780,866 to Syracuse, and claims 9 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 8 above, and further in view of Okada. These rejections are respectfully traversed.

Maeda, argued above with respect to independent claim 1, discloses systems in which no switching between rotational modes for recording is performed, but rather, each system is dedicated to a single rotational mode of recording. The system of Nakashima, like Maeda, does not switch between rotational modes of recording, and particularly, does not switch between CLV and CAV. Syracuse, like Maeda and Nakashima, uses only a single rotational mode, that is, a modified rotational mode designated as QCLV (Col.4, lines 9-11). Neither of these three references discloses or suggests the features of the Applicant's claimed invention, as asserted by the Examiner.

Particularly, neither Maeda, nor Nakashima, nor Syracuse discloses or suggests changing the rotating mode for recording between CAV and CLV according to the result of the comparing step, as recited in independent claim 8.

Claims 9 and 10 depend on independent claim 8. Since neither of the

above cited references discloses or suggests changing the rotating mode for recording between CAV and CLV according to the result of the comparing step, they cannot, either singly, or in combination, render claims 8-10 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No. 51,084, at (703) 205-8034, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: James T. Eller, Jr.
James T. Eller, Jr.
Reg. No.: 39,538

JTE/PLS:asc

P.O. Box 747
Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000

Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

The claims have been amended as follows:

1. (Three Times Amended) A method of changing a rotating mode for recording [mode] between CAV (Constant Angular Velocity) and CLV (Constant Linear Velocity), comprising the steps of:

recording input data to a recording medium in CAV mode;

reading data encoded in a wobble signal of a physical track reproduced while recording input data to said recording medium in CAV mode;

detecting a predetermined signal among the read data;

determining a current recording speed based on the predetermined signal;

comparing the determined recording speed with a predetermined speed; and

changing the rotating mode for recording [mode] between CAV and CLV according to the result of the comparing step.

4. (Three Times Amended) A method of changing a rotating mode for recording [mode] between CAV (Constant Angular Velocity) and CLV (Constant Linear Velocity), comprising the steps of:

(a) recording input data to an installed recording medium in CAV mode;

(b) measuring the frequency of a low-frequency component of a wobble signal, which is generated during said recording input data, said wobble signal being formed along a spiral physical track;

(c) comparing the measured frequency with a predetermined frequency; and

(d) determining when to change the recording mode to CLV based on the comparing step.

(e) changing the rotating mode for recording [mode] from CAV to CLV based on the comparing step.